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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,566	02/27/2004	Neal F. Vittitoe	2003-0173.02/4670-238	9095

7590 05/12/2008

LEXMARK INTERNATIONAL, INC.
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EXAMINER	
WASHINGTON, JAMARES	

ART UNIT	PAPER NUMBER
2625	

MAIL DATE	DELIVERY MODE
05/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/788,566	VITTITOE, NEAL F.	
	Examiner	Art Unit	
	JAMARES WASHINGTON	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1, 3 and 5-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3 and 5-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's response received on January 31, 2008 has been entered. Claims 1, 3 and 5-7 are currently pending. Applicant's responses are addressed hereinbelow.

Claim Rejections - 35 USC § 112

1. In light of the explanation and arguments presented by applicant for claims 1, 3 and 5-7 as to "overriding a previously established font sharpening threshold and substituting said user-defined font sharpening threshold", examiner withdraws previous rejection under 112 1st paragraph.

2. In light of the remarks presented clarifying the dependency of claim 3, examiner withdraws previous rejection under 112 2nd paragraph.

3. Examiner maintains the rejection under 112 1st paragraph as failing to comply with the written description requirement.

Regarding the implication that "a halftone screen may not be chosen in some instances", examiner maintains the previous grounds of rejection under 112 1st paragraph for new matter as

applicant has not pointed out in the specification a particular instance in which a halftone screen is not used. The cited portion of the specification (pg. 12 lines 1-3) simply states "The numerical value entered by the user could also be a normalized value that does not directly correspond to a text value, but which the RIP 12 uses to determine the text size at which font sharpening is invoked". This statement does not lead one to believe that a halftone screen is not utilized when font sharpening is not invoked. In fact, the specification indicates that font sharpening is invoked below the threshold wherein "high frequency halftone screens are used to print the characters" as opposed to the normal frequency halftone screen used to print characters above the threshold.

Examiner suggests applicant re-word the claim language to better represent the specification in which "the comparison of the text size and user-defined font sharpening threshold" determines which halftone screen is used and not whether a halftone screen is used. Again, as stated on page 3 lines 11-15, a halftone screen is always used whether font sharpening is invoked or otherwise, when rending the text; either a relatively higher frequency or lower frequency screen is chosen according to the text size and font sharpening threshold value.

Examiner disagrees that the Office Action incorrectly implies that some type of halftone screen must be chosen no matter what font size is being printed, as printing is implemented using halftone screens within applicant's own specification. (See page 9 lines 11-19 and page 10 lines 15-22). Applicant states that "font sharpening is not invoked below the threshold". Examiner's understanding of "font sharpening" as recited in the specification is changing the frequency of a halftone screen for text exceeding a predetermined threshold as stated on page 2 lines 19-21, to avoid printer artifacts such as banding and noise which become visually more noticeable as the

text characters get larger. Examiner still finds that a halftone screen is selected to render the text whether sharpening is invoked or not as the specification further states "This threshold value is predetermined, and is set in the RIP code at the time of manufacture. For text characters printed at or below the threshold, high frequency halftone screens are used to print the characters (font sharpening is not invoked), while the normal frequency halftone screen is used to print characters that are above the threshold (i.e., a relatively lower screen than that used to render the smaller text).

Applicant fails to point out the scenario within the specification in which no halftone screen is chosen when font sharpening is not invoked.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robert M. Coleman (US 7085000 B2).

Regarding claim 1, Coleman discloses a method of rendering text in an image forming device comprising:

receiving a page description language (PDL) file for imaging (Col. 9 lines 1-11; indicating a PDL is received describing the appearance of the printed page from an application program to a specific output device), said PDL file including said text and a text size value (Col. 10 lines 1-5 indicating the PDL file contains text size to determine if text is small or large. The PDL contains the objects to be printed and a description of how the objects are to be printed at Col. 9 lines 23-28);

providing a user-specified font sharpening threshold (Col. 6 lines 5-7 wherein "text below 24 point" may be entered), said user-specified font sharpening threshold being a separate value from said text size value (The value entered at the interface on the printer as indicated at Col. 6 lines 55-58 which may be "text below 24 point" as indicated at Col. 6 line 7 is separate from the text size contained within the PDL file above. The examiner makes this determination because, for example, the indication that the text size must be below "24" to render the text using an edge-sharpening halftone screen)

overriding a previously established font sharpening threshold (Col. 6 lines 32-42 wherein control would enable a user to override default settings. As indicated in the prior art section of applicant's specification, it is well known that a default font sharpening threshold is established in printing devices on page 3 lines 1-3. Coleman indicates the font sharpening threshold can be overridden at Col.6 lines 5-7 wherein "text below 24 point" can be input) and substituting said user-defined font sharpening threshold (Col. 6 lines 32-42 wherein the user defined setting is substituted for the default setting; see also Col. 7 lines 15-25);

comparing said text size value to said user-defined font sharpening threshold (Col. 5 lines 60-63 and Col. 2 lines 21-31. Col. 6 line 7 "text below 24 point" indicates the text size received

in the PDL must be compared to the threshold (i.e., text below 24 point) to select the proper halftone screen);

determining whether a halftone screen is to be used for said text based on an outcome of said comparison (Col. 2 lines 21-30 wherein an edge-sharpening halftone screen is selected for smaller text); and

Coleman does not explicitly disclose rendering said text with or without said halftone screen based on said outcome of said comparison.

However, given Col. 2 lines 21-30 wherein small text is rendered with a more "compact" screen, the larger text being rendered with a coarser halftone screen and the logic of one of ordinary skill in the art having common sense, one would deduce the predictable results of small text rendered with "said edge-sharpening" halftone screen and large text rendered "without" said edge-sharpening halftone screen depending on the comparison above. The alternative would be rendering "larger" text with a/said coarser halftone screen and rendering smaller text without said coarser screen.

Regarding claim 3, Coleman discloses the method of claim 1 wherein rendering said text with said halftone screen comprises selecting a halftone screen with a relatively higher halftone frequency when the text size value is less than the user-specified font sharpening threshold (Col. 2 lines 21-27 wherein the indication that a more "compact" (i.e., higher frequency) screen is used for smaller text), and selecting a halftone screen with a relatively lower halftone frequency when the text size value is greater than the user-specified font sharpening threshold (Col. 2 lines 25-30 wherein the more "compact" screen used for small text suggests the screen is of a higher

frequency and not to be used with larger text (i.e., exceeding the user-defined threshold value indicated at Col. 6 line 7)).

Regarding claim 5, Coleman discloses a user interface for entering a user-specified font sharpening threshold (Fig. 2 numeral 20 for entering the threshold as indicated in claim 1 above);

raster image processor for generating a halftone image from a digital representation of objects to be printed (Col. 8 lines 61-67 wherein the RIP replaces the default settings with user-defined settings from the interface), said objects including text and said digital representation including a text size value separate from said user-specified font sharpening threshold (see rejection of claim 1), said raster image processor programmed to render said text using a halftone screen with a halftone frequency selected based on overriding a previously established font sharpening threshold with said user-specified font sharpening threshold and performing a comparison of the text size value with said user defined user-specified font sharpening threshold input by a user via said user interface (see rejection of claim 1 above); and

a raster output device operatively connected to the raster image processor to generate a visible output image using the halftone image output by the raster image processor (Fig. 1 numeral 10 printer. Col. 8 lines 61-67 wherein the front end RIP is "of the printing system").

Regarding claim 6, Coleman discloses the printing system of claim 5 wherein the user interface comprises an operator panel to receive user input specifying the font sharpening threshold (Col. 3 lines 36-44 wherein a user can further refine an image object, such as text. Col. 6 lines 5-10 indicates descriptors further refining image objects).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman in view of Kaoru Ishikura (US 6452132 B2).

Regarding claim 7, Coleman discloses the printing system of claim 5.

Coleman fails to explicitly disclose or fairly suggest wherein the raster output device is an electrophotographic print engine.

Ishikura, in the same field of endeavor of providing a printing system with a graphical user interface (Abstract), teaches a raster output device being an electrophotographic print engine (Col. 5 lines 62-65 and Col. 6 lines 11-14; An electrophotographic processing portion has an electrophotographic print engine to form images, although not expressly stated).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the printing system as disclosed by Coleman wherein a user-defined font sharpening threshold is provided to utilize an electrophotographic print engine as taught by Ishikura because electrophotographic printer or copier systems are well known in the art of image processing and the combination would yield the predictable results of outputting an electrophotographic print out of text characters as taught by Ishikura utilizing halftone screens in accordance with the threshold settings set by a user using the user interface of Coleman.

Response to Arguments

6. Applicant's arguments, see remarks filed January 21, 2008, with respect to claims 1, 3 and 5-7 have been fully considered and are persuasive. The art rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Robert M. Coleman (US 7085000 B2).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMARES WASHINGTON whose telephone number is (571)270-1585. The examiner can normally be reached on Monday thru Friday: 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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May 8, 2008